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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: Graichen et al.

Serial No.: 09/681,652   Group Art Unit: 2113

Filed: May 16, 2001   Examiner: Wilson

Title: System, Method And Computer
Product For Performing Automated
Predictive Reliability   Response to Paper No.: 8

REQUEST FOR RECONSIDERATION

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 2213-1450

Sir:

Applicant carefully considered the Final Office Action mailed July 15, 2004. Applicant requests further examination and reconsideration of the present patent application.

The Examiner rejected claim 1 under 35 USC §102(e) as being anticipated by Harris et al. (US Patent Application Publication Number 2002/0091972). Applicant respectfully traverses the §102(e) rejection of the present patent application and submits that Harris et al. (hereinafter Harris) does not anticipate claim 1.

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As noted in Paper Number 4, Applicant submits that Harris does not disclose the limitation of determining age information from service data. In the Final Office Action, the Examiner submitted that the service history logs in Harris can act as age information regarding the history of maintenance and servicing to the machine. Applicant does not believe that the proper test for determining whether a reference anticipates a claim limitation under §102 involves using probabilities or possibilities (i.e., service history logs *can act* as age information). The mere fact that a certain thing may result from a given set of circumstances is not believed to be sufficient in making an inquiry under §102. Harris explicitly teaches that the service history logs include information regarding the servicing of the machine and performance measures performed on the machine (see page 2, paragraph 0023, lines 15-18). Harris does not disclose any characteristics or functionalities that acknowledges or contemplates the necessity of using the service history logs to determine age information. Not only does Harris fail to provide such a teaching, Applicant believes that a person of ordinary skill in the art would not recognize the need to use the service history logs in Harris to determine age information.

Since Harris does not disclose the limitation of determining age information from service data, Applicant submits that Harris does not generate a statistical model based partly on age information. Instead of using age information, Harris uses historical operating data, which includes machine activity logs, error code logs, sensor logs and service history logs to generate its predictive model. As noted before, the descriptions on page 2, paragraph 0023 of Harris for machine activity logs, error code logs, sensor logs and service history logs do not teach the use of age information.

Another limitation recited in claim 1 that is missing from Harris is using simulation to predict future failures for the life cycle of the plurality of components according to a statistical model. Harris does not disclose the use of simulation to predict future failures. Instead, Harris relies only on its predictive models to predict whether various significant events will occur. A simulation generally

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involves the use of a model to mimic the operation of a real or proposed system or process. A simulation is typically time-based, taking into account all resources and constraints involved as well as the way that things interact with each other as time passes. In the present invention, the simulation uses a statistical model based on age and failure information to predict future failures. A predictive model such as the one disclosed in Harris is based on collected data (e.g., historical operating data) that has been used to formulate a statistical model in which predictions are made. Harris does not teach performing a simulation based on its predictive model. Applicant does not believe that the remarks in Paper Number 4 state that Harris does perform a simulation as suggested by the Examiner. Instead, these remarks submit that Harris only uses the predictive model to predict future failures and that one of ordinary skill in the art would not have a motivation to perform a simulation because it's predictive model is used to predict failures. Since Harris' predictive model predicts failures, Applicant believes that this negates the need or desire to perform a simulation which the Examiner originally submitted would have been obvious.

In light of the above-noted distinctions, Applicant submits that Harris does not anticipate claim 1. Accordingly, Applicant requests that the Examiner reconsider and remove the §102(e) rejection of claim 1.

The Examiner rejected claims 2, 6, 9, 10, 11, 12, 20, 23, 24, 28, 29, 32, 34 and 38 under 35 USC §103(a) as being unpatentable over Harris in view of Eastman et al. (US Patent Number 6,226,597). Applicant respectfully traverses the §103(a) rejection of the present patent application and submits that claims 2, 6, 9, 10, 11, 12, 20, 23, 24, 28, 29, 32, 34 and 38 are patentable over the combination of Harris in view of Eastman et al. (hereinafter Eastman).

Independent claims 6, 9, 20, 24, 29 and 34 are similar to claim 1 in that each of these claims recites the limitations of determining age information from service data, generating a statistical model based partly on the age information and performing a simulation.

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Eastman like Harris does not teach or suggest the desirability of determining age information from the service data and generating a statistical model based partly on age information as set forth in claims 6, 9, 20, 24, 29 and 34.

With regard to the simulation limitation, Applicant submits that a person of ordinary skill in the art at the time of the invention would not have a reason or motivation to combine the teachings of Harris with Eastman to yield this feature. As mentioned above, Harris does not have a need to run a simulation because it relies on its predictive models to predict failures. Since there is no motivation suggesting the desirability to run a simulation, Applicant submits that it would not have been obvious to a person of ordinary skill in the art to utilize the simulation functionality described in Eastman with the approach described in Harris. As a result, Applicant submits that the Examiner has not established a prima facie case of obviousness for the rejection under the combination of Harris in view of Eastman.

In light of the above rationale, Applicant submits that independent claims 6, 9, 20, 24, 29 and 34 are patentable over the combination of Harris in view of Eastman. Claims 2, 10-12, 23, 28, 32, and 38 depend directly or indirectly from now presumably allowable claims 1, 9, 20, 24, 29 and 34, respectively, and thus are allowable by dependency. Accordingly, Applicant requests that the Examiner reconsider and remove the §103(a) rejection of claims 2, 6, 9, 10, 11, 12, 20, 23, 24, 28, 29, 32, 34 and 38.

The Examiner rejected claim 4 under 35 USC §103(a) as being unpatentable over Harris in view of Eastman in further view of McDonald et al. (US Patent No. 6,530,065). The Examiner added McDonald et al. (hereinafter McDonald) for its disclosure of compiling results produced from the simulation. McDonald provides no teaching or motivation that suggests the desirability of determining age information from the service data and generating a statistical model based partly on age information as set forth in claim 1. Since claim 4

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depends from presumably allowable claim 1, Applicant submits that claim 4 is allowable by dependency and requests that the Examiner reconsider and remove the §103(a) rejection of this claim.

In view of the foregoing remarks, Applicant requests that the Examiner reconsider this application and allow claims 1-38.

If the Examiner has any questions regarding the present patent application, the Examiner can call Applicant's attorney, David Goldman, at telephone number (518)-387-5927 or (518)-387-5903.

Respectfully submitted,

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Schenectady, New York
Dated: August 20, 2004

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